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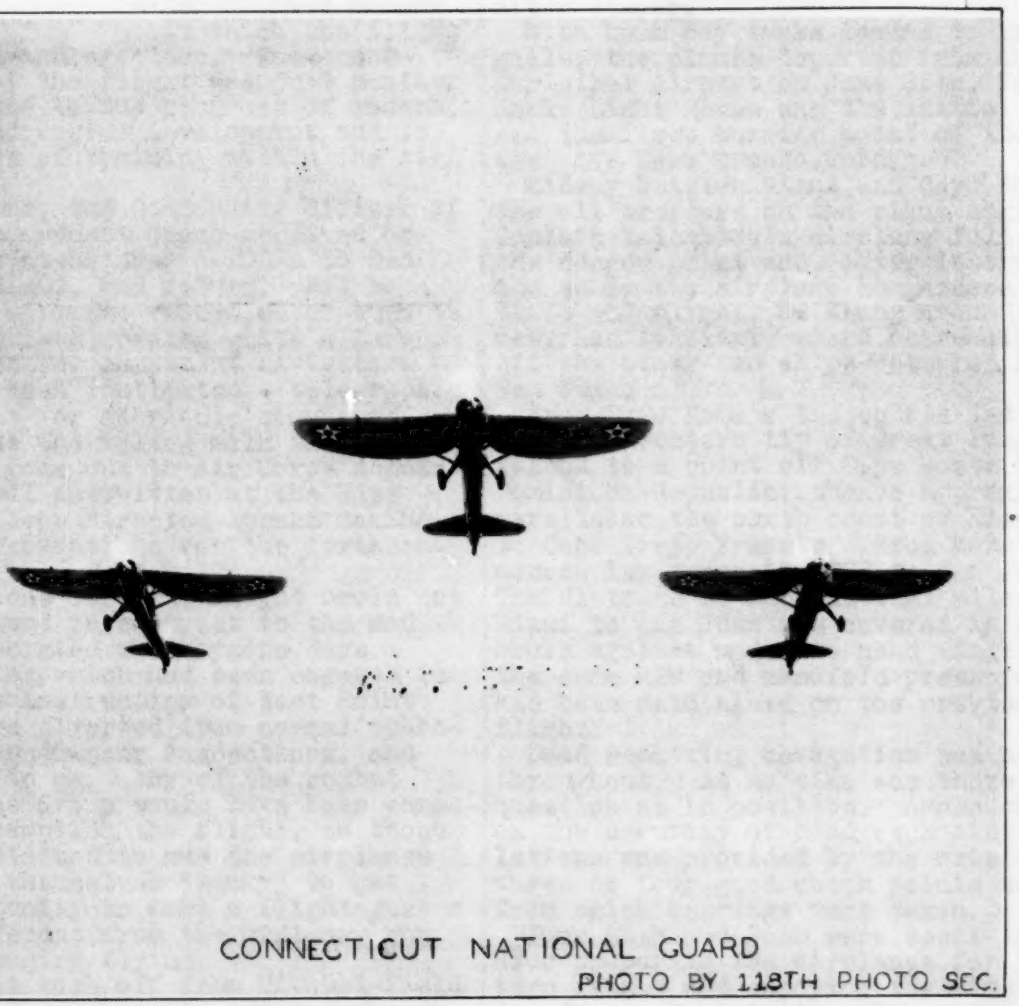

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VOL. XX AIR CORPS NEWS LETTER NO. 15.

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The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

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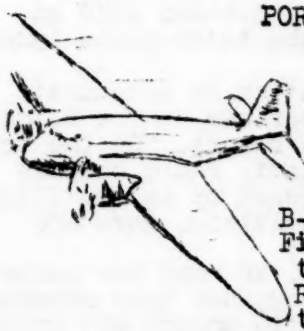
PORTO RICAN FLIGHT BY NINTH GROUP BOMBERS

By the Mitchel Field Correspondent



Perhaps the most remarkable thing about the recent flight of Martin B-10B's from Mitchel Field, Long Island, to San Juan, Puerto Rico, was the matter of fact manner in which the flight was planned and executed. The accomplishment of the flight was just another silent salute to the progress of modern airplane and engine development and to the progress of training within the Air Corps.

In mid-June, the Commanding Officer of the 9th Bombardment Group received orders to dispatch three B-10B's to San Juan, via Miami, and return. Not so many years ago, the reception of such an order would have created quite a furor. A mad search for competent navigators would have been instigated - telegraphic requisitions for aperiodic compasses, drift sights and malted milk tablets would have gone out to Air Corps depots - in short, all activities at the Base would have been directed toward making adequate preparations for the forthcoming flight.

Preparations for this flight could not have been more in contrast to the mad frenzy associated with bygone days. Three Martins, which had been engaged in the routine instruction of West Point cadets, were diverted from normal operations, given 40-hour inspections, and were ready to go. Any of the combat crews of the Group would have been competent to accomplish the flight, so those who were selected to man the airplanes considered themselves "lucky" to get this opportunity to make a flight just a little different from the ordinary run of cross-country flying.

The flight took off from Mitchel Field for Miami, Fla., shortly after daybreak on June 24th, under the command of Capt. F.B. Valentine. The course from Mitchel Field to Tybee Island Light House, near Savannah, Ga., was principally overland. From Tybee Island Light House to Miami Municipal Airport, the course lay mainly over the Atlantic. The first day's flight of 1,000 nautical miles was accomplished in 7¼ hours. The Wright "Cyclones" perked along beautifully at 1525 RPM and 28" of mercury.

The City of Miami lived up to its reputation for hospitality, when officials of the Air Chamber of Commerce took the officers and men in tow until "taps" which, in view of the long hop scheduled for the following day, was not long after dinner.

With bomb bay tanks loaded to the gills, the planes departed from the Miami Municipal Airport on June 25th. Fowey Rocks Light House was the initial point, and the first turning point of the course was off Cayo Romano, Cuba.

Midway between Miami and Cayo Romano, the oil pressure on the right engine of Captain Valentine's airplane fell off to the danger point and, after instructing the other two airplane commanders to continue the flight, he swung around and returned to Miami, where he remained until the other two ships returned from San Juan.

From Cayo Romano the course led past the southwestern tip of Great Inagua Island to a point off Cape Monte Cristi, Dominican Republic, thence approximately paralleled the north coast of Hispaniola to Cape Viejo Francis. From here the course lay generally ESE to San Juan. The distance of 956 nautical miles from Miami to San Juan was covered in eight hours against moderate head wings, at the same RPM and manifold pressure as had been maintained on the previous day's flight.

Dead reckoning navigation was used throughout. At no time was there any question as to position. Ample check on the accuracy of dead reckoning calculations was provided by the existence of three or four good check points enroute, from which bearings were taken.

June 25th and 26th were spent in Puerto Rico preparing the airplanes for the return flight and enjoying the sights of San Juan and vicinity. Pan-American servicing facilities were made available. Gas was pumped by hand from drums and proved to be a long drawn out process. The twenty-hour inspection made at San Juan might very well have been omitted, for the engines were in perfect shape.

The officers at El Morro, Headquarters of the 65th Infantry, took upon themselves the task of educating the visit-

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ing airmen to Puerto Rico in two days and, needless to say, they did a very thorough job of it. Historically, San Juan is fascinating with its 16th Century Spanish forts. One could not help but gaze in astonishment at the thick walled embattlements and wonder at the huge amount of labor and materials necessary to their construction. Legend has it that the King of Spain once strolled down to the beach bordering the Bay of Biscay and, shading his eyes so as to get a better view eastward, exclaimed: "I have poured so much gold into the fortifications of Puerto Rico that I should be able to see it from here."

The city is a queer combination of the modern and the antique. Strolling down a granite paved street scarcely wide enough to accommodate the passage of two autos, you encounter Sammy Goldstein's Dress Shoppe sandwiched between old Spanish edifices.

All of the U.S. Army troops, except the officers, are native Puerto Ricans. Immediately noticeable to the casual visitor is their trimness and the high degree of morale and discipline which pervades the entire regiment. Rumor has it that the enlisted personnel of the command average five children per man.

It was with regret that early on June 27th the flight left San Juan. The heavily loaded B-10B's used every foot of field on the take-off, although there was a moderately brisk wind blowing. Upon completion of a 3,000-foot runway which is now under construction, hazards incident to take-off will be considerably lessened. The route to Miami lay over the same course as had been followed on the 25th and was uneventful - never, however, to the point of boredom, for there was always enough water beneath the planes to keep everyone on the alert. The elapsed time of the day's flight was 6¾ hours.

After spending the night in Miami, the flight took off on the morning of the 28th for Mitchel Field and arrived thereat in 7½ hours. The total flying hours from Mitchel Field to Puerto Rico and return, a distance of some 3812 nautical miles (4395 land miles) was 29¾ hours.

In closing, it might be well to give a few of the conclusions reached by members of the flight as a result of the trip. First of all, from the point of view of comfort, the Martins leave much to be desired during an extended flight. After four or five hours with eyes glued upon the lubber line of a gyro, the pilot begins to see pink elephants - with no relief in sight until a landing is made. Secondly, the navigators are in sore need of room in which to spread out the charts and other paraphernalia which are his stock in trade. A drift sight capable of reading drift at relatively high altitudes is a necessity. Another crying need is an emergency ration kit, buoyant and easily opened.

Radio communication between the planes and ground stations was highly successful. Position reports were sent out at every turning point and every half hour thereafter. In every instance they were promptly acknowledged. Illustrative of the efficiency of the radio set-up was the fact that when the planes were landing at San Juan, Station NYYC at Miami intercepted the inter-plane landing instructions.

The Naval Air Station at Lakehurst, N.J., took radio bearings on the flight after each position report. On the trip from San Juan to Miami, radio compass indications were picked up as the flight passed Great Inagua Island, some 500 miles out.

As went the radio, so went the entire flight - not exciting, not hair raising, but a quiet tribute to modern Air Corps equipment and training.

Ed. Note:

It is interesting to recall that over 14 years ago, April 3, 1923, to be exact, the Army Air Corps completed within the period of one month what was then considered one of the most remarkable pioneering ventures in the history of American aviation, namely, the flight of six DeHaviland airplanes from Kelly Field, Texas, to San Juan, Porto Rico, and return to Bolling Field, D.C.

The flight from Miami, Fla., over water for the most part, to San Juan, involved stops at Key West, Fla.; Havana, Santa Clara and Guantanamo, Cuba; Port Au Prince, Haiti, and San Domingo City, San Domingo. The departure from Miami was made on the morning of March 11, 1923, and San Juan was reached at noon on March 19th. The return flight over the same route was started on March 23rd, and Miami was reached on March 29th. The flight involved a total distance of approximately 6,000 miles.

In the report which was made on that flight, one particular sentence should provoke a smile - "The Porto Rican flight demonstrated the ease with which aerial communications may be established with the insular possessions of our country, such as Porto Rico."

Two of the twelve pilots who participated in this flight, Lieuts. C.B. Austin and Ivan G. Moorman, have since died from natural causes. The leader of the flight, Thomas G. Lanphier, then a Captain, and Erik H. Nelson, then a 1st Lieutenant, resigned from the Air Corps a number of years ago. The remaining eight members of the flight are still affiliated with the Air Corps, viz: Majors Caleb V. Haynes, James A. Woodruff, George C. McDonald, Rex K. Stoner, D.H. Dunton, Newton Longfellow, Captains Guy Kirksey and Edgar T. Selzer.

SOVIET FLYERS ARRIVE AT MARCH FIELD
By the March Field Correspondent

Major Victor H. Strahm and Technical Sergeant Gregory A. Mitchell, Air Corps, both from March Field, Calif., were the first U.S. Government officials to welcome the now famous Russian flyers - Gromov, Yumasheff and Danilin - on American soil.

The fact that that soil happened to be part of Southern California and only 30 miles from March Field was rather a coincidence, since the Soviet flyers had flown all the way to the United States - Mexican border, near Caliente, but had been forced back north due to heavy fog banks along the Pacific shores.

Major Strahm, in answer to an excited telephone call from some farmer in San Jacinto, practically leaped into the nearest A-17A, and later managed to borrow a car in which he brought the tired but happy airmen back to the post. They arrived at March Field at 8:40 a.m.

Technical Sergeant Mitchell remained with the plane as official government representative. Knowing through news dispatches that the flyers were unable to speak English, an interpreter was held in readiness at March Field, but in his excitement he took a car to where the flyers had landed and missed them on their way in.

Word to the world was flashed at 8:05 a.m. that the Russians descended safely in a rough cow pasture two miles north of San Jacinto, 30 miles from the Air Corps Base, March Field. According to the first man who spoke (or rather tried to speak) to the foreign aviators, they kept repeating the one English word they knew: Army - Army - and wouldn't budge an inch until someone in authority arrived.

When this Correspondent on the way back towards March Field asked in four languages (neither of them Russian) why they had missed March Field, they said: "Malinki - Malinki," which means "small." They meant to imply that the field was but a small place on their maps and therefore hard to find - not that the field itself was too small, as newspapers erroneously stated. The huge bat-winged ANT-25-I, which made history throughout the world after its epoch-making flight, is at present being guarded by March Field soldiers. Civilians in the vicinity do not create a problem, however, and within a few days it is expected that the plane will either be flown here or dismantled on the spot for shipment back to Russia.

Upon arrival at the field here, the flyers expressed their admiration for the neatness and cleanliness of the quarters, and made use of the toilet facilities offered to them by officers of the local Officers' Club. Colonel Carlyle H. Wash welcomed them, in the name of the Government and the Army Air Corps, to March Field, acting in charge during the absence of Colonel John H. Pirie.

In general, the huge mat in front of the Headquarters Building enjoys quite a bit of traffic, since March Field serves to many Los Angeles flyers as a short and convenient stop-over to and from Palmdale, Imperial Valley and other places of interest. But it appears as if all records were broken that Wednesday, with 18 private planes, including a chartered United Air liner, on the field by 9:00 a.m. And they kept on coming in throughout the day.

The Officers' Club was besieged practically from the moment word was flashed to the outside world, and newsmen found the Russians willing enough to pose for a few photos, but they did not get much satisfaction from their conversation. The flyers were practically taken charge of by their government's representatives here.

The Russian aviators retired by 11:00 a.m., having had a light ham and egg breakfast (American style) at the Club's mess room, and slept until 6:00 p.m. In the meantime, plans were made by the N.B.C. Broadcasting network to have the flyers speak over the microphone in a national hook-up, and with direct contact to Moscow. They spoke in their native tongue. The broadcast lasted from 6:45 until 7:00 p.m.

In the meantime, March Field officials had taken over the permanent guarding of the unique aircraft which had carried three daring aviators to fame, posting several men from the 4th Air Base Squadron there and having the plane roped in, so that too-well wishers could not damage the craft in their enthusiasm.

After the broadcast, the March Field guests had a light supper, and left about 9:00 p.m. with Acting Consul General Grigori Gokhman for San Diego. During the broadcast they gave word to their praise in connection with the rousing welcome afforded them and the hospitality offered them by the Air Corps representatives. Colonel Mikhail Gromov, in thanking Brigadier General Delos C. Emmons, for his well wishes, expressed the hope that the flight made by them would help create better understanding between the United States and the Soviet Union. It has been given to understand that the plane will be dismantled as it stands, with Air Corps mechanics giving a helping hand.

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DOUGLAS B-18 ARRIVES AT HAMILTON FIELD
By the News Letter Correspondent

The first of the newest defense weapon of the Army Air Corps - the Douglas B-18 Bombardment airplane - arrived recently at Hamilton Field, Calif.

This airplane is a forerunner of the type with which all units of Hamilton Field will be equipped within a very few months. The Douglas Bomber is one further advancement of the research carried on within the last two years by the Douglas Aircraft Company during the development of the radical Douglas Transport which is now in use throughout the entire civilized world.

Although the B-18 is designed solely for military use, and thus differs in most respects from the commercial type transport, the basic problem of wing and fuselage design to carry great weights at high speeds was solved by further refinement of its commercial sister plane.

While no formal performance test has been conducted on this newest airplane, it is known that it is capable of carrying a substantially larger load than the present Martin B-10B type airplane with which the units at Hamilton Field are now equipped and, in spite of this larger load, its efficiency is not diminished. It attains a high speed in excess of 225 miles an hour, with a sufficiently large radius of action adequately to protect the entire Pacific Coast.

The airplane is an all-metal, low-wing monoplane, powered with two of the latest type Wright "Cyclone" radial engines. It is one of the first combat planes to diverge from the traditional Army coloring of yellow wings and blue fuselage, being left in its natural state of gleaming aluminum. However, the customary Army identification on wings and rudder surfaces remains.

This new Douglas Bombardment airplane is one of the first of 177 of its type purchased by the Air Corps for the use of the GHQ Air Force, of which Hamilton Field is a part. When the units of Hamilton Field are entirely equipped with this new airplane, they will be able to provide a defense for the Pacific Coast, especially of the Bay Area, second to none.

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On June 22nd, Lieut. Colonel Harvey S. Burwell, Air Corps, took over the responsible position of Commanding Officer of the 19th Bombardment Group at March Field, Calif. He relieved Lieut. Col. Hubert R. Harmon, who was assigned to duty as a student at the Army War College, Washington, D.C.

Colonel Burwell was accompanied to his new station by Mrs. Burwell and their son.

NAVIGATION TRAINING AT HAMILTON FIELD
By the News Letter Correspondent

The course of instruction in Navigation conducted by the Navigation School of the 88th Reconnaissance Squadron at Hamilton Field, Calif., was completed on July 1st. Nine officers were rated qualified navigators, and the Squadron now has all but one of its officers qualified. The problems and missions in the course were designed to carry out every type of problem in dead reckoning navigation. The last month of the course was devoted solely to test problems of the most difficult type, and each student was required to perform successfully these problems in order to pass the course.

The 88th Reconnaissance Squadron has four junior officers who have partially completed a course in celestial navigation. These officers have frequent opportunities to practice Celestial Navigation in the air, and will be well qualified to take the Group Celestial Navigation course when it is started.

The Squadron is conducting an Advanced Dead Reckoning Navigation School for the 7th Bombardment Group. The School began on July 14th, with ten officers from the Bombardment Squadrons and three officers from the 88th Squadron as students, all of whom are qualified navigators. The course deals solely with long range interception and search and patrol missions over sea to a maximum distance of 300 miles.

Two OA-4A airplanes are used for flying the missions. The students who had not previously flown this type of airplane (amphibian), were taken to Clear Lake for transition and water landings. The water landings proved to be good sport and brought the comment from some that they would enjoy being forced down at sea just to land on water again.

The over-water flying in this course, as in all other over-sea flying at Hamilton Field, is quite safe, every available means of safety precaution being employed.

One of the combat crews has an interesting mission during the first part of July. The mission terminated at Modesto, Calif., in the afternoon. Upon landing, two local civilian flyers presented themselves and proceeded to entertain the Army airmen with a varied assortment of refreshments. Modesto has a warm place in its heart for Army flyers. The crew took off at sundown on a celestial navigation mission which ended at Hamilton Field.

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Major Isaiah Davies, Air Corps, who returned from duty in the Philippines and reported at the Advanced Flying School at Kelly Field, Tex., on July 6th, was assigned to duty as Secretary, Public Relations Officer, Director of Ground Training and Post School Officer.

AERIAL WARFARE IN SPAIN

Extracts from an article which appeared in a recent issue of the French aviation magazine "Revue de l'Armee de l'Air", which touches on aerial operations in the Spanish conflict, are quoted below as of possible interest to readers of the News Letter, viz:

"On July 18 (1936) Spanish aviation, with machines in the number of 160 to 180, was essentially made up in equal parts of Nieuport 52 single-seater pursuit planes and Breguet 19 two-seaters.

During the first days of the conflict at least three fourths of the aviation effectives went over to the side of the Rebels, but the actual combat equipment was soon composed of highly effective German and Italian machines, provided with German and Italian crews.

German and Italian Materiels

During the weeks of September and October, when the aerial superiority of the Rebels was manifest, their aviation always collaborated in the same manner during the frontal attacks. These were most frequently conducted over fronts of five to six kilometers on either side of a road, which permitted of massing and moving more easily batteries of 155's and 105's and 75's, tanks, and armored cars. Before the infantry attack was released, aviation came into action with the bomb (10 kilograms) and then with the machine gun, and frequently brought about the rapid demoralization of improvised, poorly sheltered and poorly armed infantrymen.

It was estimated that at the middle of October, General Franco's staff had at its disposal about 200 airplanes, two-thirds of which were pursuit planes (Heinkel, Arado and Fiat) and one-third bombers (Savoia-Marchetti and Junkers). This number seems to have been maintained to mid-January in spite of serious losses, evidently thanks to constant resupply or to the setting up on the spot of numerous reserve machines brought into Spain at the beginning of the Civil War.

The Junkers Ju. 52, derived from a civilian type, are poorly defended; no turret in front, two turrets in the rear, the one above firing only toward the tail and on the sides, the one below firing only toward the front. The Savoia-Marchetti S. 81, while better armed, seems to have turrets which are very hard to maneuver. Bombers of these types, if isolated and attacked by two or three pursuit planes, are lost.

The fire power of the Heinkels and Arados (two machine guns with accelerated fire) is very great. The Fiats C.R. 32 have proved to be very vulnerable toward the front, where the water and oil radiators are easily struck. Their gasoline tank is uncovered under the fuselage, and almost all the airplanes of this type which have been brought down have caught fire before touching the ground.

The German pursuit planes, always operating in patrols of three with remarkable flexibility, attack the bombing planes in the rear and from below while concealing themselves from the sight of the machine gunner of the lower turret behind the stabilizer and the tail wheel. They attack in turn in a line and make only one pass, breaking off the combat in order to form and patrol again at once. For lack of such tactics the Italian pursuit planes, though individually adroit, have suffered serious losses.

Among the aerial bombardments of Madrid, that of December 17 seems to have been the one in which so far the greatest number of machines were engaged: 25 Junker trimotors protected by 23 Heinkels are said to have taken part in it.

In the Balearic Islands, intervention of Italian airplanes some ten days after the landing of the Government forces was decisive. Some 20 land machines, which had probably come from Sardinia for the occasion, bombarded and machine-gunned until the situation of the landed troops had been rendered untenable; these latter were too poorly armed to reply to the attack. * * * *

French and Russian Materiels

On the government side the old Breguets and Nieuports available had a brief career. Heterogeneous materiel without military value, acquired in haste, did no more than clutter up the hangars. A small number of modern French military airplanes, purchased without armament and equipped in Spain with second-hand Vickers and bomb launchers, constituted in fact to the end of October the aviation of the Madrid Government. At this latter date, as is now known, a large number of Russian bombing planes and pursuit planes intervened in the aerial combat. It seems that their number quickly became equal to that of the Rebel aviation and that this numerical equilibrium has been maintained since that time. But the quality of the Soviet machines, of which this was the first external manifestation and without doubt the first military intervention, must be made more precise at this point.

Of the Russian airplanes also, two-thirds are pursuit planes of the types I. 15 and I. 16.

The I. 15 is a small biplane of the Boeing type, with the lower wing set

back toward the rear, a short fuselage provided with a Wright 'Cyclone' engine of 650 to 730 h.p. (without compressor), constructed on permit in Russia and with a 2-blade metal propeller. Four synchronized machine guns, breeches readily accessible to the pilot. Equipment for blind flying, with Sperry horizon. A fixed landing gear with very slender wheels and tires. Weight a little more than 1,000 kilograms. * * Very manageable; very simple mixed construction; 2½ hours radius of action.

The I. 16, of which the number does not appear to be very great, is a monoplane with low wings and short fuselage, with curving wing tip controllers, retractable undercarriage, and hand brakes. Wright 'Cyclone' engine (compressor operating at 2500 meters); 2-blade metal propeller. Maximum speed, over 450 kilometers (280 miles) per hour; two machine guns with accelerated fire in the wings; fixed line of sight; radius of action, over 2 hours.

The Russian bombing planes, of which some 60 soon came into action and which evidently derived in Russia from the current series construction, are remarkable bimotors of the 'S B' types, which in Spain are called the 'Katiouskas.'

The 'S B' is a monoplane with traversing wing; * * It is an extremely manageable fighting and bombing three-seater, whose maximum speed exceeds 425 kilometers per hour; * * The radius of action with 600 kilograms of bombs is said to be as much as 5 hours. * * *

The Russian crews, on board airplanes of good and high performance, with which they seem to be familiar, are distinguished by strict observance of very precise rules of group flight and of action in combat.

For the first time in war operations in which two air forces faced each other, the crews were systematically provided with parachutes. These latter seem to have functioned very well on the whole. But every time that a pilot or a machine gunner has opened his parachute immediately after leaping, he has been killed by the adversary's machine gun fire. Mention is made of the case of a pursuit flyer who was saved in these conditions because his two patrol comrades protected him all the way to the ground by interrupting their mission. It has become established that one must let himself fall to 150 or 200 meters from the ground before opening the parachute.

The aerial operations in Spain have revealed the great importance of camouflage against the attack of bombing planes. In particular, camouflage of the flying fields is an essential and delicate operation, properly entrusted to specialists who have undergone a long period of training. * * *

The quantities of bombing planes which have been observed since September 28 traveled in a number of as many as eight per mission, and the pursuit planes which escorted them were in the number of six, eight and sometimes twelve. The mean altitude of the day bombing raids was 2500 meters. The first protection patrol flew at approximately the same altitude, the second 1000 meters higher, and the third between 4,000 and 5,000 meters, never beyond 5,500 meters.

The pilots of single-seater machines who have been found by the Government forces seemed to be very well trained in group flying and aircraft fire. Being as a rule good maneuverers, they have avoided isolated engagements in which they have been outclassed several times by adversaries having at their disposal airplanes whose climbing abilities enabled the pilot in a short turn to take advantage of the height and then dive down onto the Fiat or the Heinkel. This superiority naturally became more and more pronounced as the altitude of combat increased. Conversely, the compressor with which the engines of the Government airplanes were equipped, made combat at a low altitude much less favorable to them.

It proves to be very difficult for a bombing multi-seater to get away by day from the attacks of a single-seater pursuit plane; the only effective protection is then in the escorting single-seater. In no circumstance has one seen bombing machines attacked by the enemy pursuit until this latter has endeavored to get rid of these escorting planes, whether by engaging them in combat or by waiting until the escort single-seaters and bombing planes have separated. The effective attacks have always taken place on the return from the raids; the aggressor had then slipped through the pursuit planes and had attacked the bomber, most frequently after a flight at low altitude very far under it in order to take advantage of the camouflage of its upper planes. It would then reascend and practice its attack at a level with the bombing plane by firing upon it from the rear in the axis of the tail. Only the machine gunner of the upper rear turret (or the machine gunner of the lower rear turret) had occasion to fire a few shots; but the volume of fire of the weapons at his disposal being very restricted, he received from the adversary a quantity of projectiles that was overwhelming.

Since the vulnerability of the multi-seaters is great, especially when they are equipped with water cooled engines, it is very risky to send them off on a day mission without an escort of five or six single-seaters for each bombing

plane, the number of escort planes increasing by two per bomber in case of massive raids. It is then necessary that one pursuit plane remain permanently near each bombing plane so as to be able to protect it at any moment and especially at the moment when it sets out on the return journey. * * *

The destruction brought about by the steel-core perforating bullets is considerable. Such projectiles have several times pierced the length of the fuselage of multi-seaters, tearing off metal parts and transforming these parts into projectiles capable of superficially wounding the occupants of the airplane. The rents occasioned at exit by these projectiles, on sheet metal coverings, had a diameter up to 20 centimeters.

The most rapid multi-seaters were by far the least vulnerable. It was possible for them, in fact, to get awayfrom the attacks rapidly while the escort planes kept the enemy pursuit forces engaged. * * *

The Government multi-seaters have proved very vulnerable when they were attacked at a right angle on the side, on a level with the two engines. The objection frequently made that in the Spanish warfare there was a deficiency of qualified crews need not be considered here; for when skillfully attacked on the two sides by enemy pursuit planes the present multi-seater succumbs to its adversary. The comparison of an airplane to a flying fortress is possible only in the mind of theoreticians. The bringing down of attacking pursuit planes was possible of accomplishment only in case the crew had sufficient coolness to let the enemy plane approach to within 50 meters; in this case the firer of the rear machine gun could be certain of the result. In the attack upon a Potez by three Heinkel 52 pursuit planes, where from the very beginning the front pilot and the bomber were put out of action by wounds, the firer of the rear machine gun was able to defend himself at a distance of 50 meters in such manner that he brought down one Heinkel and was able to compel the other two to break off the fighting.

Until November the pursuit planes equipped with a compressor rendered very little service on the Spanish front. The reason is that the fighting there always took place between 100 and 3,000 meters of altitude, whereas these single-seaters are made to fight at altitudes of from 4,000 to 10,000 meters (13,123 to 32,810 feet). The Heinkel 52 and the Arado 68 are superior at altitudes of 100 to 3000 meters to the compressor machines as regards handiness and are equal to them as regards fighting qualities. The only advantage of the compressor machines was that of being able to take refuge at greater altitudes by switching on the compressor in order to climb very rapidly from 3,000 to 4,000 meters to 6,000 or 7,000 meters. Up to 4,000 meters the speed of climb was equal for the two categories of machines; from 4,000 meters up the superiority of the compressor single-seaters was such that the adversary could not follow them. As concerns armament, practice has demonstrated that the setting up of the machine guns in the wings of single-seaters is not satisfactory, for these distance-controlled arms cannot be reached by the pilot in case of need. The synchronized machine guns firing through the field of the propeller and placed in front of the pilot are preferable.

The method of the Rebels * * is that of full collaboration with the land forces, which makes it necessary to fly at altitudes of 100 to 2,000 meters. The tactics employed at present is the following: 10 to 20 airplanes, Heinkels or others, attack at a certain point with the machine gun and the small bomb. During this aerial attack the enemy infantry is preparing for the assault. When it is thought that the demoralizing effect has been attained which is expected of aviation, the enemy releases the attack protected by its air force. This demoralization is often obtained, especially in the absence of any anti-aircraft defense. I have had occasion to converse with former French or German combatants who were in command of Government units of the first line; all of them have assured me that it was impossible to induce the machine gunners to fire upon enemy airplanes flying at a low altitude and attacking the troops with the machine gun and the grenade. From this experience one may draw the conclusion that it is necessary to organize a tactics of strict collaboration between the air force and the ground troops, whether for the defensive or for the offensive. These formations must in so far as possible be numerically superior to those of the enemy, for the enemy judges the air forces not in accordance with the speed and quality of the machines but in accordance with their number.

In my opinion, experience has shown that the excessive complication of the modern pursuit plane is leading into a blind alley. In time of war it is impossible to count upon great numbers of specialized pilots capable of managing special types of machines. It is necessary to take account only of the average of the pilots utilized, and it is this medium personnel, it is these reserves, which alone are determining. In my opinion, the instruction of a pilot for modern pursuit planes should cover at least six months. Moreover, the attention required by the very maneuvering of these machines quite prevents the pilot from ex-

ploiting the flying and military qualities of the machine. In combat the pilot is obliged to concentrate all his attention upon the enemy and not upon the maneuvering of his machine; but the pilot of the most recent single-seaters has not only to conduct a combat against the enemy but in the first place against his airplane itself. * * *

As concerns metal airplanes, practice seems to demonstrate that they do not stand comparison with the machines of mixed construction. If a metal airplane is damaged, it is obliged to undergo a general overhauling, while a machine of mixed construction can usually be repaired on the spot. In my opinion, the pursuit plane with wooden coverings and steel frame is preferable, not only because repair is easier but because their manufacture in series is more rapid and less onerous.

Retractable landing gears should be proscribed as regard pursuit planes. The reason is very simple; after one or two aerial combats the pilot is exhausted and he cannot still be expected to concentrate all his attention upon landing. Furthermore, practice has demonstrated that one bullet suffices to prevent the functioning of the mechanism, whether it be electrical, pneumatic or operated by hand. Too often, therefore, the pilot is obliged to land without the gear, and it follows that even if he is not wounded the machine is nevertheless put out of commission. * * *

I believe that the present task of military aviation is that of producing a great number of airplanes of light types and of instructing for them all the pilots required in order to be ever ready both for the defense of the troops and for the defense of the cities.

The complicated pursuit planes of 1,000 h.p. and over can render great service at altitudes of 6,000 to 10,000 meters; but what is the use of that if the enemy action unfolds between the ground and 3,000 meters? Moreover, for the price of one of these pursuit planes such as are now being manufactured in France and Great Britain it is possible to construct five or six light single-seaters, whose value in combat, at the lower altitudes, is certainly equal if not superior to that of the powerful single-seaters. Today it is not the quality of the materiel which plays the decisive role but it is especially the quality of the pilot and the number of airplanes engaged. Numbers are indispensable, for aviation is obliged to cooperate with the troops engaged on the ground; and these latter will have no confidence in their own aviation unless it is present in the battle in great numbers."

RECREATIONAL FACILITIES IN FLORIDA

For a nominal outlay of funds, Air Corps officers and their families are afforded the opportunity of availing themselves of a two-weeks' vacation period at a locality which offers such attractions as excellent climate, a splendid and difficult golf course, surf bathing, fishing, hunting, dancing and boating.

Quarters have been provided at White Point, Valparaiso, Fla., for the use of officers on duty with the Air Corps Tactical School and such other officers as may be so detailed at the Valparaiso Bombing and Gunnery Base. The quarters consist of ten 2-room cottages and five 3-room cottages, all modern and comfortable. When not in use by officers on duty at the Base, their use has been authorized for recreational purposes.

Valparaiso is located 50 miles east of Pensacola, Fla., on the Choctawhatchee Bay and adjacent to the Choctawhatchee National Forest. Paved highways lead in from the North-East and West. Fort Walton, a resort town, is located ten miles west and provides excellent Gulf. swimming and other recreational facilities.

A splendid mess for officers and members of their families is operated by the officers' mess and the bombing and gunnery base at White Point. Meals are $1.25 per day or $8.00 per week, with half rate for children 12 years of age and under).

The charge for 2-room cottages is $1.25 per day and $5.00 per week, and for 3-room cottages $1.75 per day and $7.00 per week. Extra beds are 25¢ per day and $1.00 per week. Ice and bed linen are included in the above charges.

The cottages have two beds per room and are equipped with essential furniture, bedding and linen, towels excepted. It is desirable to bring camp chairs and such other equipment as the individual may desire.

Limited accommodations are available for the quartering of servants. Servants are not available locally, but arrangements for the care of children during evenings can be made with the wives of the caretakers.

Medical service may be had from the local contract surgeon on duty with the Civilian Conservation Corps, and at the Fort Barrancas Hospital at Pensacola. The railhead is at Crestview, Fla., 20 miles north on paved highway.

There is a sub-exchange of Maxwell Field at the base, carrying such items as tobacco, soft drinks, toilet articles, gasoline, oil, etc.

Priority in granting reservations is in the order set forth below:

1. Officers on duty with the Air Corps

Tactical School when on a duty status at the Valparaiso Bombing and Gunnery Base.

2. Officers of the Regular Army other than those mentioned in (1) above when on a duty status at the Valparaiso Bombing and Gunnery Base.

3. Officers on duty with the Air Corps Tactical School when absent with authority to visit Valparaiso, Fla., and vicinity.

4. Officers of the Regular Army, absent with authority to visit Valparaiso, Fla. and vicinity not covered by (3) above.

5. Such other individuals as may be authorized by the Commanding General, Maxwell Field, Ala.

Applications for reservations should be submitted to The Commanding Officer, Valparaiso Bombing and Gunnery Base, Valparaiso, Fla. Should it be impossible to grant reservations for period requested, optional dates will be recommended. Reservations are normally for a 14-day period.

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NEW CLASS AT SCHOOL OF AVIATION MEDICINE

Another routine course of instruction to qualify medical officers for duty as Flight Surgeons was commenced at the School of Aviation Medicine, Randolph Field, Texas, on July 15th, and will continue for four months. Eleven student officers are enrolled, five from the Medical Corps, U.S. Army, five from the Medical Corps, U.S. Navy, and one from the Medical Corps of the Mexican Army - Major Julio Cesar Aguilera, of Mexico City.

The Army medical officers are Captains John R. Copenhaver, Randolph Field, Tex. Burt Held, Barksdale Field, Shreveport, La. Paul H. Jenkins, Maxwell Field, Ala. Frank H. Lane, Langley Field, Va., and Donald D. Flickinger, March Field, Calif.

The medical officers of the Navy are Lieuts. Thomas L. Allman, Marine Barracks, Quantico, Va., and Alfred W. Eyer, Naval Hospital, Washington, D.C., and Lieuts. (jg) James C. Fleming, William O. Fowler and Dermot Lohr, all of the Naval Hospital, Washington, D.C.

Two basic courses are conducted annually at the School of Aviation Medicine, starting in July and December of each calendar year.

In addition to the resident courses, the School conducts throughout the year extension (correspondence) courses of considerable magnitude.

The School of Aviation Medicine is an activity of the Air Corps Training Center.

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THE NAVIGATION SCHOOL AT MITCHEL FIELD

The sixth class of the 9th Bombardment Navigation School at Mitchel Field, L.I., New York, started to work on July 6th. This very successful course of instruction has been running since August, 1935.

The Air Corps officers comprising the present class are Majors Ulysses G. Jones, Clarence H. Welch, Captains Joseph Smith, Milton M. Towner, 1st Lieuts. Emery S. Wetzel, Dwight Divine, II, Millard C. Young and Milton F. Summerfelt.

For the next three months the above officers will pursue a course in Dead Reckoning and Celestial Navigation, chart construction and allied subjects under the instruction of Captain John P. Doyle, Jr., and 1st Lieut. David P. Laubach, Air Corps, the latter having been recently appointed as Assistant Instructor in the School.

An outstanding feature of this course are the 63 hours of Meteorological instruction given by 1st Lieut. Royden E. Beebe, Air Corps. In this connection, the News Letter Correspondent states that this course in Meteorology is the most complete one given in the Air Corps to officers from a non-specialist point of view.

At present, practical navigation instruction at Mitchel Field is being conducted with two O-44 type amphibian airplanes and such Martin Bombers as are necessary. Approximately 60% of the flying is being done in the latter type aircraft. A new Sikorsky Amphibian type airplane, which is to be delivered in the near future, will aid materially in carrying out the practical problems of this type of training.

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COLLEGE STUDENTS VISIT AIR DEPOT

A group of about thirty advanced students in the summer session class in manufacturing policies and practices of the School of Business Administration, University of Texas, Austin, conducted by Dr. Chester F. Lay, Professor of Accounting and Management in that University, made a tour of observation through the Engineering Department of the San Antonio Air Depot on July 12th.

The students expressed themselves as being greatly pleased with and benefited by the opportunity of viewing the Depot's methods and practices.

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During the month of June, the Engineering Department of the San Antonio Air Depot, Duncan Field, Texas, overhauled a total of 17 airplanes and 58 engines and repaired 55 airplanes and 26 engines.

THE ARMY'S NEW MULTI-SEATER FIGHTER

Hon. Harry H. Woodring, Secretary of War, recently announced that the Army's new, experimental, multi-seater fighter was delivered from factory to flying field for final assembly and initial flight test.

This new type was designed and built by the Bell Aircraft Corporation, Buffalo, N.Y., to fill an imperative need by the Air Corps, in view of the present trend toward giant bombing planes of the Flying Fortress type now flying in the leading nations of the world.

This experimental fighter, technically called the XFM-1, meaning: Experimental Fighter, multi-seater, has been pronounced by flying men, who secretly have watched it grow from drawing board and mock-up to a completed article ready for flight, as a formidable fighting machine which should prove itself capable of coping with these Bombers.

The plane contains some radical departures from conventional military design. To begin with, it is a pusher - its propellers are behind the wings. The builder declares that this gives increased propeller efficiency. Equally important, however, is the fact that this arrangement permits the wing gunners, one on either wing, to have a free field of fire and observation to the front, uninterrupted by engine or propeller. This change in design also frees the gunners from having to work in the propeller blast, formerly a tremendous handicap to gun maneuver and accuracy.

To be a successful fighter, a flying machine must be much faster than its target. It is believed that this plane can overhaul any air targets. Another essential quality in an air destroyer is the ability to strike with power when it has engaged its prey. This plane answers with six guns, more powerful armament than ever before carried on a fighter. It also carries light bombs.

The new fighter is not a little airplane, as have been the Pursuit airplanes of the past. It accommodates a crew of five - pilot, co-pilot-navigator, radio operator-gunner, and two outboard wing gunners. It is powered by two engines recently developed by the Allison Engineering Corporation in conjunction with Air Corps engineers. No gasoline is carried in fuselage or engine nacelles, all being carried in liquid tight compartments in its giant wings. It is claimed that this method materially reduces the fire hazard.

The XFM-1 is a low wing, all-metal, monoplane, embodying all the latest design devices to increase its speed and air-worthiness. Its landing gear and tail wheel are electrically retractible. It carries flaps to reduce its landing speed. It provides heated compartments for all members of its crew, which will be much in demand at its fighting ceiling, over thirty thousand feet.

The builder of this plane points to the fact that it contains some new and radical departures which will have far-reaching significance for the civil air industry as well as the military. The first of these is its power plant location and its pusher propellers; next is the auxiliary power plant aboard for retracting landing gear, for lights, radio and starters. This auxiliary plant drives nine electric motors, taking this load off the two engines which drive the propellers. This new fighter can continue to transmit after forced landing when its main power plants are dead.

An innovation in this plane, on which military men look with great favor, is the complete interchangeability of any or all members of the crew. The wing gunners can travel between their stations and the main fuselage while in flight; the co-pilot can change places with the pilot, the radio operator can man the guns; all stations have intercommunication. The advantageous location of the wing gunners in front of the engines permits them to see the pilot, and he them; this makes visual signals practicable between all members of the crew. In addition, complete telephone inter-communication is provided.

After its initial shake-down flights at Buffalo, the plane is scheduled for flight to the Materiel Division, Wright Field, Dayton, Ohio, for completion of its experimental tests. When thoroughly tested for mechanical and technical details, the Chief of the Air Corps, General Westover, plans to send the fighter to the General Headquarters Air Force at Langley Field, Va., where new tactics will be devised to fit this new military type.

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ANOTHER "FLYING FORTRESS" FOR THE 49TH

Delivery of a Y1B-17 Boeing Bomber was made to the 49th Bombardment Squadron, Langley Field, Va., from the Boeing factory at Seattle, Wash., on July 3rd. The ferry crew included Captain Archibald Y. Smith, 1st Lieut. Robert F. Travis, 2nd Lieut. Carlos J. Cochrane, Staff Sergeant Troy V. Martin, Staff Sergeant Henry P. Hansen and Private 1st Cl. Russell E. Junior. With delivery of this plane, the Squadron has at present three of these new Boeing Bombers. Squadron operation and tactical efficiency have been greatly advanced by the acquisition of these new Bombers.

WEST POINT GRADUATES ASSIGNED TO UNDERGO FLYING TRAINING

Recent orders of the War Department detailed to the Army Air Corps for flying training a total of 106 second lieutenants of the Regular Army, who graduated from the U.S. Military Academy, West Point, N.Y., June 12, 1937. Constituting 36% of the entire graduating class, this is the largest number of West Pointers to choose the Air Corps as their branch of the service since the year 1929, when 110 members out of a graduating class of 297, or 37%, were detailed to the Air Corps for flying training.

The 106 young officers, above mentioned, are under orders to proceed upon the expiration of their graduation leave to Randolph Field, Texas, and report to the Commanding General of the Air Corps Training Center for duty and flying training.

The following tabulation shows the number of West Point graduates who were commissioned in the various branches of the Army, and the number from each of these branches assigned to the Air Corps for flying training, viz:

Branch of Service in which Commissioned		Assigned to Air Corps for flying training	Per Centage
Engineers	45	14	31
Q.M. Corps	6	3	50
Signal Corps	9	4	44
Field Artillery	50	17	34
Coast Artillery	36	10	28
Cavalry	29	1	62
Infantry	118	40	34
Total	293	106	35.6

A year of intensive flying training is ahead of these West Point graduates to whom aviation presents a special appeal, i.e., eight months of primary and basic training at the Primary Flying School at Randolph Field, Texas, and four months of advanced training at the Advanced Flying School at Kelly Field, Texas. Those who succeed in completing the year's course will be awarded the rating of "Airplane Pilot" and transferred to the Air Corps, while those failing to make the grade will return to the branch of the Army in which they were commissioned upon their graduation from the Military Academy.

It is now 16 years since the policy was inaugurated of assigning West Point graduates to the Air Corps for flying training. During the period from 1922 to 1936, inclusive, 911 West Pointers were accepted for flying training, of which number 403 graduated from the Advanced Flying School up to and including the year 1935. In addition, approximately 38 members of the 1936 Military Academy graduating class are scheduled to graduate from the Advanced Flying School next October, making the grand total of graduated flyers 441, or 48% of the number who commenced training. It would appear from this that slightly less than one-half of the young men who are mentally and physically qualified to undergo the course of flying training at the Air Corps Training Center are able to complete the course successfully.

The following tabulation covering a 15-year period of flying training given West Point graduates may be of interest:

Year	Total No. of Graduates	Assigned to the Air Corps	Pct.	Number graduating from the Advanced Flying School	Pct.
1922	102	16	15.6	8	50.00
1923	261	51	19.5	25	49.21
1924	406	61	15.0	20	32.78
1925	244	42	17.2	9	21.43
1926	152	18	11.8	7	38.88
1927	203	30	14.7	16	53.33
1928	260	77	29.0	53	68.83
1929	297	110	37.0	41	32.27
1930	235	85	36.1	41	48.23
1931	296	92	31.0	43	46.74
1932	258	69	26.7	39	56.52
1933	346	92	26.6	43	46.74
1934	247	60	24.3	30	50.00
1935	277	47	17.0	28	59.57
1936	276	61	22.8	38*	60.31
Total	3860	911	23.6	441	48.40

* Scheduled to graduate in October, 1937.

The West Point graduates of the June, 1937, Class, who will soon report at Randolph Field to learn the intricacies of piloting military airplanes, are enumerated below, as follows:

Class Standing	Name	Home
	Corps of Engineers	
2	Campbell H. Snyder	Winnsboro, La.
6	Jack N. Donchew	Slater, Mo.
9	Charles F. Mitchim	Inverness, Miss.
10	Frederick M. Thompson	Los Angeles, Calif.
12	Charles M. McAfee, Jr.	Knoxville, Tenn.
15	John D. Stevenson	Tie Siding, Wyo.
18	Nils O. Ohman	E. Dedham, Mass.
19	George L. Holcomb	Kemp, Texas
23	William R. Klingerman, Jr.	Terre Haute, Ind.
29	John M. Cromelin	Orange, N.J.
34	Walter Eckman	Houston, Texas
40	Richard P. Klocko	Dunkirk, N.Y.
46	Noel H. Ellis	Cisne, Ill.
50	Harold B. Wright	Calvin, Okla.
	Signal Corps	
63	Kenneth S. Wade	San Diego, Calif
76	Gale E. Ellis	Beaver Falls, Pa.
77	Richard R. Barden	Penn Yan, N.Y.
92	Whiteford C. Mauldin	Lockesburg, Ark.
	Quartermaster Corps	
61	Thomas A. Holdiman	Marshalltown, Iowa
65	Donald B. Brummel	Chicago, Ill.
102	LeRoy H. Rook	Brooklyn, N.Y.
	Field Artillery	
28	Asher B. Robbins, Jr.	Elsmere, Del.
37	Douglass P. Quandt	Benicia, Calif.
59	John F. Batjer	Houston, Texas
67	John G. Eriksen	Milwaukee, Wis.
75	Harry F. Van Leuven	Minneapolis, Minn.
96	Elmer C. Blaha	Camden, N.J.
112	Ivan W. McElroy	Austin, Texas
113	William K. Horrigan	Fort Thomas, Ky.
140	Robert F. Lesser	Lincolnville, Me.
149	Sam W. Agee	Silver City, N.M.
164	Harold E. Marr, Jr.	Searport, Me.

Field Artillery (Continued)

173	Coy L. Curtis	Globe, Ariz.
178	Harry E. Hammond	Pine Bluff, Ark.
183	Charles B. Westover	Washington, D.C.
200	Conrad H. Diehl, Jr.	Washington, D.C.
203	Harry W. Elkins	Macon, Ga.
204	John W. Browning	Gainesville, Fla.

Coast Artillery Corps

58	Walter C. DeBill	Coeur d'Alene, Idaho
82	Charles L. Robbins	Elkhart, Ind.
95	Edward M. Lee	Carbondale, Pa.
103	Alvord Rutherford	Washington, D.C.
118	Alan D. Clark	Washington, D.C.
121	Robert H. Herman	Middletown, Ohio
150	Robert Taylor, 3rd	Baltimore, Md.
167	Curtis R. Low	Needham Heights, Mass.
174	Richard H. Hackford	Gardenville, N.Y.

Cavalry

86	Wilbur H. Stratton	Seattle, Wash.
98	John B. Nance	Seattle, Wash.
99	Bruce K. Holloway	Knoxville, Tenn.
108	Maurice A. Preston	Tulare, Calif.
125	Edward C.D. Scherrer	Anna, Ill.
132	Don R. Ostrander	Stockbridge, Mich.
136	Floyd J. Pell	Ogden, Utah
185	Carl L. Lindquist	Fort Hayes, Ohio
190	Samuel C. Gurney, Jr.	Ridgewood, N.J.
192	Harvey C. Dorney	Olney, Ill.
201	Paul W. Scheidecker	West New York, N.J.
205	James J. Cosgrove	Lancaster, Pa.
215	William E. McDonald	Urich, Mo.
220	John R. Ulricson	Milford, N.H.
222	Lawrence A. Spilman	Ottumwa, Iowa
224	William G. Hipps	Curwensville, Pa.
88	Richard W. Fellows	Algoma, Wis.

Infantry

64	John G. Zierdt	Grantville, Pa.
87	John F. Foy	Mount Airy, N.C.
142	Robert H. Stumpf	Barberton, Ohio
180	Jack E. Caldwell	Searcy, Ark.
184	James S. Hatfield	Orlando, Fla.
186	Horace Greeley	Jackson Heights, N.Y.
188	Richard G. Williams	Citronelle, Ala.
189	Joseph A. Miller, Jr.	Brevard, N.C.
196	George M. Maliszewski	Lowell, Mass.
219	Jasper N. Durham	Salem, Mo.
228	Joseph G. Focht	Reading, Pa.
229	Marshall R. Gray	Newton Center, Mass.
233	Augustin M. Prentiss, Jr.	Edgewood, Md.
239	Robert B. Hubbard	New York, N.Y.
241	Philip D. Brant	New York, N.Y.
246	Winfield L. Martin	Weehawken, N.J.
248	Colin P. Kelly, Jr.	Madison, Fla.
251	Woodrow W. Dunlop	Manville, R.I.
254	Gilbert F. Bell	Augusta, Ga.
256	Kenneth O. Sanborn	Potter Place, N.H.
258	George B. Sloan	Franklin, N.C.
261	Carl F. Lyons, Jr.	Maplewood, N.J.
262	Olen J. Seaman, Jr.	Bronx, N.Y.
268	James H. Skeldon	Toledo, Ohio
270	William J. Cain, Jr.	Bayonne, N.J.
273	Malcolm Green, Jr.	Sausalito, Calif.
274	Thomas E. Powell	San Francisco, Calif.
275	Ephraim F. Graham, Jr.	San Antonio, Texas
276	Charles W. Stark, Jr.	Trenton, N.J.
278	George M. Simmons	Point Pleasant, W.Va.
279	George R. Cole	Jersey City, N.J.
280	Frank W. Andrews	Glendale, Calif.
283	Gordon C. Leland	San Jose, Calif.

Infantry (Continued)

284	Morton D. Magoffin	Deerwood, Minn.
286	William R. Maxwell	Langley Field, Va.
287	James T. Posey	Henderson, Ky.
291	Wesley S. Calverley	Philadelphia, Pa.
294	Render D. Denson	Birmingham, Ala.
296	John F. Polk	Fort Bliss, Texas
297	John P. Connor	Pelham Manor, N.Y.

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STATION ASSIGNMENT OF RESERVE OFFICERS

The following-named second lieutenants of the Air Reserve, who graduated from the Advanced Flying School, Kelly Field, Texas,* were on July 15th assigned to various Air Corps stations, as follows:

To Barksdale Field, La.
- Horace Daniel Aynesworth
- Ancil David Baker
- William Edwin Bayse
- George Addison Blakey
- Edwin Shepard Chickering
- Raymond Leonard Cobb
- Murray William Crowder, Jr.
- Allman Tenney Culbertson
- Raymond Leavitt Curtice
- Ronald Frederic Fallows
- Julien Walker Freeman
- Charles Ross Greening
- Charles Clark Kegelman
- Guilford Roland Montgomery
- Joseph Albro Morris
- John Howard Payne
- James Otis Reed
- William Reynolds Stark
- Frank King Thompson
- Henry Viccellio
- Barton Morrow Russell

To Brooks Field, Texas:
- George Rochardson Carr

To Fort Knox, Ky.:
- Howard Monroe Means

To Langley Field, Va.
- John Richardson Alison
- Henry Clay Godman
- Milton LaFayette Hardeman
- Wilbur B. Sprague, Jr.
- Ansley Watson
- John Russell Marshall
- Adolph Edward Tikofski

To Fort Lewis, Wash.:
- Thomas Danville Brown

To March Field, Calif.:
- Murray Alston Bywater
- Charles Alfred Clancy
- Waymond Austin Davis
- Arthur William Kellond

Richard Frederick Lorenz
- George Leroy Robinson
- Theodore Arnold Suiter
- Delmer Edward Wilson

To Marshall Field, Fort Riley, Kans.:
- Harold Yorke Sewart

To Mitchel Field, N.Y.:
- Morris Edwin Thomes
- McClellan Ferguson Stunkard, Jr.

To Scott Field, Ill.:
- Henley Vedder Bastin

* June 9, 1937.

To Moffett Field, Calif.:
Guy Leonard Hudson, Jr.
Frederick Lawrance Moore
To Selfridge Field, Mich.:
Thomas Lee Butner
Leland Gordon Fiegel
Donald Harry Kauffman
Homer Matheson MacKay
Harold Jacob Rau
To Pope Field, Fort Bragg, N.C.:
Lewis Elliott Countway.

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RESERVE OFFICERS ASSIGNED TO RANDOLPH FIELD

Under Special Orders of the War Department, recently issued, the following-named second lieutenants of the Air Reserve have been relieved from assignment and duty at Brooks Field, Texas, July 15, 1937, and directed to report for duty at Randolph Field, Texas:

Henry Ovide Bordelon
George Stevenson Buchanan
Edward Francis Cullerton
William Edgar Davis, Jr.
William Eades
Clarence Theodore Edwinson
Dross Ellis
James Oldham Ellis
John Gebelin, Jr.
Willard Dudley Griffith
George Albert Hatcher
Robert Loughery Johnston
George Francis Keene, Jr.
Bingham Trigg Kleine
Andrew Olaf Lerche
Richard Dale McCloskey
Marion Malcolm
Donald Earl Meade
Andrew Dale Moore
Roy William Osborn
William Quenton Quearns Rankin
Frank Beard Scott
Horace Armor Shepard
Chester Lee Sluder
Cy Wilson
Robert Carroll Wood

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NEW SQUADRON COMMANDERS AT LANGLEY FIELD

Three Air Corps officers, who recently reported at Langley Field, Va., for duty, were assigned to the command of tactical organizations, as follows:

Major Harold L. George assumed command of the 96th Bombardment Squadron, relieving Major Jasper K. McDuffie, who is under orders for duty as student at the Air Corps Tactical School.

Major Russell L. Maughan, who recently graduated from the Army Industrial College, assumed command of the 33rd Pursuit Squadron, relieving Captain George F. Schulgen, who is to report with the next class at the Air Corps Tactical School.

Major William C. Goldsborough, formerly on duty at Selfridge Field, Mich., assumed command of the 37th Attack Squadron, relieving Captain Ned Schramm.

PHOTOGRAPHIC ACTIVITIES OF 88TH SQUADRON

During the GHQ Air Force Maneuvers on the West Coast in May, three K-3B and one Graflex cameras were sent out with each of the three Bombardment Squadrons in the 7th Bombardment Group. One photographer was detailed with each squadron to service the cameras in the field and forward exposed film to the laboratory at Hamilton Field. All bombing, except at night, was photographed. In addition, graflex photographs for records and for publicity purposes were made at each squadron's dispersed airdrome.

Just prior to the Maneuvers, photographs were made for the 2nd Wing Staff S-2 and S-3. These consisted of photographs of the squadron airdromes and camps at Stockton, Merced, Fresno, Visalia, Delano and Bakersfield, Calif., and a large mosaic of the area occupied by the 1st Wing at Muroc Lake.

During the Maneuvers, the photographic section performed all the photographic reconnaissance for the 2nd Wing. This required the production of the two additional mosaics of the 1st Wing area and daily flights to the enemy area for pinpoint and oblique photographs, each flight requiring about six hours flying time.

The photographic laboratory was kept open 24 hours per day by maintaining two working shifts. Considerable time was saved in making mosaics by using a stapling device instead of adhesive. Twelve copies of every photograph were required, which called for a high rate of production.

"Summing up the activities during the Maneuvers," asserts the Hamilton Field Correspondent, "it may be said that all in all the photographic section in conjunction with the squadron operations successfully completed its mission in keeping the Wing Headquarters informed at all times of the enemy's activities."

Following the Maneuvers, a test was completed on the T-1 Flashlight Bomb which had begun some time before. One bomb was dropped over Yerba Buena Island to take a night photograph of the San Francisco Bay bridge. The explosion shook houses and buildings to such an extent that it evoked the comment in a San Francisco paper that "It was undoubtedly the loudest photograph ever made." However, no damage was done by the explosion.

The photographic section of the 88th Reconnaissance Squadron is commanded by the photographic officer, 2nd Lieut. W.W. Pennis, Air Reserve. The section chief is Staff Sergeant Fredenburg. Six members of the section took the recent Air Mechanics examinations on Camera Repair and all passed - Privates, 1st Class, Greene, Atkinson, Privates Shelby, Farris, Johnston and Goodnight. Five members of the section fired and qualified as Expert Aerial Gunners, viz: Staff Sergeant Fredenburg, Private, 1st Class, Atkinson, Privates Shelby, Farris and Goodnight.

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Second Lieut. Charles A. Sprague, Cavalry, a member of the 1937 graduating class of the U.S. Military Academy, was assigned to Randolph Field, Texas, for flying training, thus making 105 graduates to be assigned to this duty.

BIOGRAPHIES

Lieut. Colonel Laurence F. Stone

Lieut. Colonel Laurence F. Stone, Air Corps, who was recently assigned to duty at Selfridge Field, Mt. Clemens, Mich., following his graduation on June 9,1937, from the Advanced Flying School, Kelly Field, Texas, was born in Idaho, February 9, 1892. Following his graduation from the University of Idaho in 1915, with the degree of Bachelor of Science, he accepted a commission as second lieutenant of Infantry, U.S. Army, December 4, 1916. He was on duty at the Army Service Schools at Fort Leavenworth, Kansas, from January 3 to March 27, 1917, and was then assigned to the 11th Infantry at Camp Harry J. Jones, Arizona, where he commanded a company and later served as regimental adjutant until January, 1918.

While on duty overseas with the A.E.F., Colonel Stone served as brigade liaison officer to April, 1918; commanded a company of the 53rd Infantry to September, 1918; commanded a company and then served as battalion, regimental operations officer to February, 1919, on the front and in training areas. He was on duty as Assistant, G-1, 6th Division, to June, 1919, and with G-5, General Headquarters, Paris, France, to August, 1919. Upon his return to the United States he successively performed such duties as battalion commander, company commander and E. & R. Officer to August, 1920, being stationed with the 3rd Infantry at Camp Eagle Pass, Texas, and later with the 19th Infantry at Camp Harry J. Jones, Arizona.

Detailed in August, 1920, to the Army Air Service, Colonel Stone was a student officer at the Army Balloon School at Ross Field, Arcadia, Calif., and, upon completion of his lighter-than-air training, he remained at the Balloon School as Instructor, as Officer in Charge of Training and as Meteorological Officer. He was rated a Balloon Observer, May 9, 1921. During his tour of duty at Ross Field, he also took primary airship training, and for a brief period commanded the post in the absence of the regular commanding officer.

On June 29, 1922, Colonel Stone reported for duty at Scott Field, Belleville, Ill., where he served as Director of the Ground Department of the Balloon and Airship School, as Instructor, as Acting Assistant Commandant and as Assistant Commandant, to March 3, 1924. He also completed the course of instruction in airship piloting.

Transferred to Brooks Field, Texas, Colonel Stone was on duty at that station to June 9, 1924, and was then transferred to the Advanced Flying School at Kelly Field, Texas, where he completed the Special Course in Airplane Observation, following which he was assigned to duty as a student at the Air Service Engineering School at McCook Field, Dayton, Ohio. Upon his graduation from this School, he remained on duty at McCook Field in the Industrial War Plans Section of the Engineering Division. Colonel Stone participated in the National Elimination Balloon Race held at Little Rock, Ark., in April, 1926, piloting the McCook Field entry, with Captain G.R. Oatman as aide.

Assigned to station at Langley Field, Va., June 24, 1926, Colonel Stone was on duty as Instructor at the Air Corps Tactical School until September, 1927; then as student at this School for one year, and then as Instructor once more until August, 1929, when he was assigned to take the two-year course at the Command and General Staff School at Fort Leavenworth, Kansas. Graduating from this School on June 16, 1931, he was assigned to the Air Corps Training Center, Duncan Field, Texas, where, in addition to other duties he commanded the 67th Service Squadron. In August, 1932, he was assigned as Post Executive Officer at Randolph Field, and while stationed there temporarily commanded the post during the absence of the regular commanding officer.

Transferred to the Hawaiian Department in March, 1933, Colonel Stone was in command of the Hawaiian Air Depot during his two-year tour of duty in the Islands. In addition, he served as Purchasing and Contracting Officer of this Depot to August, 1933.

Upon the completion of his service in the Hawaiian Department, Colonel Stone was assigned as student at the Air Corps Primary Flying School at Randolph Field, Texas, where he successfully completed the 8-months' course of instruction, also the four months' advanced course at Kelly Field, Texas, thereby receiving the rating of "Airplane Pilot" in addition to the three other flying ratings already held by him, viz: "Balloon Observer", "Airship Pilot" and "Airplane Observer."

Colonel Stone was promoted to 1st Lieutenant, December 29, 1916; to Captain, October 12, 1917; to Major, August 28, 1929, and to Lieut. Colonel, temporary, March 12, 1935.

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LIEUT. COLONEL WILLIS H. HALE

Lieut. Colonel Willis H. Hale, Air Corps, now under orders for duty in the Panama Canal Department, was born in Kansas, January 7, 1893, and is a graduate of the Kansas State Normal School. From June 26, 1913, to March 23, 1917, he was a lieutenant in the Philippine

Constabulary, and he then accepted a commission as a second lieutenant of Infantry, with which branch of the service he served in the Philippines, China, England and France, being affiliated at various times with the 8th and 15th Infantry and with the 84th and 26th Divisions. He graduated from the 84th Division Signal School in 1918, and in the same year was an honor graduate of the Infantry School of Arms. In 1920 he graduated from the Army Signal School at Fort Leavenworth, Kansas, and, prior to being detailed to the Air Corps for flying training, he was on duty as Assistant Professor of Military Science and Tactics at Yale University, in charge of the Signal Corps R.O.T.C.

Reporting for duty as student at the Primary Flying School, Brooks Field, Texas, July 1, 1922, Colonel Hale completed the course of instruction thereat on May 26, 1923, when he was transferred to the Advanced Flying School at Kelly Field, Texas., from which he graduated on December 21, 1923. He was rated "Airplane Pilot" and "Airplane Observer," effective January 18, 1924.

Transferred to Langley Field, Va., Colonel Hale served as Commanding Officer of the 20th Bombardment Squadron and as Operations Officer of the 2nd Bombardment Group until September 1, 1927. In addition, he performed various duties incident to maneuvers and anti-aircraft tests at different times, and served as a member of various boards of officers.

After serving as Post Executive Officer, Langley Field, from September 1 to 16, 1927, he was assigned as a student at the Air Corps Tactical School at that post, and upon his graduation in June, 1928, he was transferred to Washington, D.C., for duty in the Inspection Division, Office of the Chief of the Air Corps. On December 30, 1918, he was assigned as Chief of the Operations Section, Office of the Chief of the Air Corps. In addition, he served as a member of the Air Corps Procurement Board. During the period from March 20 to April 30, 1930, he participated in the Air Corps Field Exercises at Mather Field, Calif. At various times he served temporarily as Chief of the Training and Operations Division.

Assigned in August, 1932, as a student at the Command and General Staff School, Fort Leavenworth, Kansas, Colonel Hale graduated from the two-year course at this school on June 16, 1934, following which he was again assigned to station at Langley Field, where he served as Commanding Officer of the 2nd Bombardment Group and later as Executive and Operations Officer of the 2nd Wing, Headquarters GHQ Air Force, until August 13, 1936, when he was assigned as a student at the Army War College, Washington, D.C., from which he graduated in June, 1937.

Colonel Hale was promoted to 1st Lieutenant, March 20, 1917; to Captain, November 5, 1917; to Major, December 1, 1929, and to Lieut. Colonel (temporary) March 2, 1935.

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TEN MORE "FLYING FORTRESSES" PURCHASED

The award to the Boeing Aircraft Co., of Seattle, Wash., of a contract for 10 more B-17 four-engine Bombers, the type generally known as the "Flying Fortress," was recently announced by the Secretary of War, Hon. Harry H. Woodring.

The airplanes purchased under this contract will be exactly the same as those recently delivered by the Boeing Company, except for minor changes found advisable as the result of the service test. The contract also includes an option for three additional Bombers, making a total of 13 on this order, and an adequate complement of spares. The total contract, if the option is exercised, will amount to $3,708,002.20.

Each airplane will be powered with 4 Wright "Cyclone" engines, manufactured by the Wright Aeronautical Corporation at Paterson, N.J. The Materiel Division of the Air Corps and the GHQ Air Force have been conducting an intensive service test of the "Flying Fortress" since January of this year. During this test, these airplanes have been flown thousands of hours under all conditions of heat, cold, wind and weather. They have proven to be eminently satisfactory for the purpose for which designed and are an outstanding example of the efficiency of American airplane manufacturers and designers.

These Bombers can fly at speeds in excess of 225 miles per hour, carry 5 machine guns and a crew of 7 to 9 men, including a commanding officer, pilot, co-pilot, navigator, engineer, bomber, radio operator, and gunners. All the members of the crew can freely change stations, and for long flights sufficient additional personnel can be carried so that the operators of the airplane may be relieved from time to time and secure the necessary rest.

This airplane can fly and maintain its altitude with a load on two engines. This safety factor practically eliminates the possibility of forced landings due to engine failure. Coupled with its long range, this makes it possible, by the use of radio communication, for this airplane to find a safe landing field somewhere, even when fog covers large areas.

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"IT'S NOT THE HEAT - IT'S THE HUMIDITY"

Here is a suggestion from the Power Plant Branch of the Materiel Division, Wright Field --

While your Power Plant personnel are suffering with the humidity ranging well above some 80 per cent, we are inclined to call your attention the phrase -"It's not the heat, it's the humidity." This is especially true in the filling of gas tanks. If gas tanks are not filled immediately after you land from a flight and the humidity is high, a small amount of cooling over night or even a portion of the daytime will cause several drops of water to accumulate in the bottom of your fuel tank. The engine will use up a portion of this water as it goes through your fuel lines to the carburetor. Please do not expect your engine to gulp it down by the tablespoon full, however, without a few nasty sputters, especially as you take off when your tail is raised to a flying position.

Please remember - it's not the heat - it's the humidity - fill your gas tanks immediately upon landing!

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NEW FLIGHT RECORDER

If the instrument invented by Dr. Samuel Spitz, creator of the famous marine depth sounder, proves successful, charting a transport's continuous progress through the skies by means of a small map in an airport office may be possible.

In the presence of Army and Navy officials, Dr. Spitz, of Burbank, Los Angeles County, conducted a 200-mile test of his "flight recorder" accurately and successfully plotting the progress of an airplane on a round trip flight between Los Angeles and Bakersfield. Another successful demonstration was conducted over the 400-mile airway from Los Angeles to Oakland.

While the plane flies toward its destination its movement is charted by means of an advancing series of lights, jumping steadily along a scale map of the airway terrain. As the ship proceeds slower or faster, the tiny lights also alter their speed. When the ship approaches the terminal, the light suddenly shifts to a localized map, more detailed. Thus a ground operator can guide the plane through treacherous mountains into the airdrome, even in zero zero weather.

Dr. Spitz began his experiments four years ago and has spent $100,000 in perfecting his invention. He disclosed that his laboratory has been incorporated for $500,000 and within two months he plans to build a factory beside his shops on Hollywood Way, Burbank, to produce flight recorders. Official tests are being conducted with Army and Navy and Department of Commerce observers to determine definitely the value of the invention.

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CHANUTE SOLDIER WINS FIREMAN'S TROPHY

Private 1st Class John I. Butler, 10th Air Base Squadron, Chanute Field, Rantoul, Ill., was recently awarded a handsome combination siren and red light for his work, attendance and interest exhibited at the Annual Fire College of the Illinois Firemen's Association which met at the University of Illinois for a three-day period.

The college is held by the Illinois Firemen's Association for the purpose of instructing in the latest practices of fire fighting and fire prevention. Present at this year's meeting were 456 firemen, fire chiefs and fire inspectors, representing communities from every part of the State of Illinois.

The work covered both practical demonstrations and written examinations in the following subjects: ladder work, rope work, first aid, artificial respiration, gas mask drills, pumps, fire-fighting apparatus and auxiliary equipment.

The Commanding Officer of Chanute Field, Lieut. Colonel Junius W. Jones, Air Corps, commended this soldier upon his excellent work at this annual college. Private Butler is at present on duty at the Post Fire Station and in the Post Fire Department. The winning of this reward is evidence of the interest that this young soldier is taking in qualifying himself for the military duties which he is performing.

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RESERVE OFFICER JOINS PAN-AMERICAN

From time to time the News Letter has published the names of Air Reserve officers who have terminated their active duty tours in order to accept positions with commercial air lines. While these frequent separations of Air Reserve officers are regretted by the Air Corps, there has been no disposition on its part to stand in the way of a Reserve officer who had an opportunity to land a permanent berth in commercial aviation.

These officers are not lost to the Air Corps, for they maintain their reserve status, and their services are available to their country in the event of an emergency. Those who enter commercial aviation, and who thus are enabled to add to their skill and experience as airplane pilots, are naturally to be expected to be of greater value to the nation in time of need.

(Continued on page 17).

NOTES FROM HERE AND THERE

The personnel of the San Antonio Air Depot, Duncan Field, Texas, on July 8th bade a regretful good-bye to its old commander, Colonel John H. Howard, and gave a hearty welcome to the new Depot Commander, Lieut. Colonel Henry J.F. Miller. Colonel and Mrs. Howard departed on that date for a two months' leave of absence, visiting relatives in Honolulu, before joining his new assignment, the Headquarters of the 7th Corps Area, Omaha, Neb., for staff duty, after having been in command of the San Antonio Depot since June, 1934. Lieut. Colonel and Mrs. Miller are no strangers to the Depot, as he was in command of Brooks Field, San Antonio, Texas, before coming to this station.

At the present time the 2nd Bombardment Group, Langley Field, Va., has received nine YlB-17 type airplanes, and expects that the full complement of thirteen will be filled in the near future.

Miss Martha Hickam, daughter of Mrs. Horace M. Hickam and the late Colonel Horace M. Hickam, was married to 1st Lieut. Rudolph Fink, Air Corps, in the Base Chapel at Langley Field, Va., on July 14th, Chaplain Silas E. Decker officiating. Mrs. Brooke Allen, of Mitchel Field, N.Y., was matron of honor, and Lieut. William C. Bentley, of Langley Field, was best man. A small reception at the Langley Field Officers' Club for immediate friends and relatives followed the ceremony. Among the guests were Major Generals Oscar Westover and Frank M. Andrews, Mrs. Andrews, Brigadier General and Mrs. Gerald C. Brant, Colonel Henry B. Clagett, Colonel and Mrs. Walter R. Weaver, Lieut. and Mrs. Brooke Allen, Hubert, John and Barbara Hickam.

Colonel Weaver, Commanding Officer of Langley Field, arranged to have the wedding take place there, for he was a roommate and classmate of the late Colonel Hickam in the Class of 1908 at West Point.

Following the wedding trip, the newly married couple will reside at Dayton, Ohio, where Lieut. Fink will attend the Air Corps Engineering School at Wright Field.

Reserve Officer Joins Pan-American

(Continued from Page 16)

The latest Air Reserve officer to curtail his tour of extended active duty is Lieut. James L. Bledsoe who, as the Correspondent of the 33rd Pursuit Squadron, Langley Field, puts it, "is turning in his parachute this week and checking out of the Air Corps. Lieut. Bledsoe has signed up with Pan American, to be stationed at Miami, Fla. Jimmie is a very capable pilot and we feel sure he will make Pan American a good man."

On July 7th, the 8th Pursuit Group returned to Langley Field from Virginia Beach after two weeks' maneuvers, both in the air and on the popular beach. Everyone agreed that it was an ideal place for summer field work.

LIEUT. WALLACE RECEIVES THE D.F.C.

"For distinguishing himself by heroism and extraordinary achievement while participating in an aerial flight * * *," 1st Lieut. James H. Wallace, Air Corps, was awarded the Distinguished Flying Cross on Saturday, July 17th, at Hamilton Field, Calif., the entire personnel of the 7th Bombardment Group and the 5th Air Base Squadron witnessing the ceremony. The presentation was made by Colonel Davenport Johnson, Commanding Officer of Hamilton Field, and acting for the Secretary of War.

The circumstances leading up to this award to Lieut. Wallace were as follows: On November 20, 1935, Lieut. Wallace (then temporary Captain) as co-pilot, with Lieut. Frank A. Armstrong, pilot, was assigned the mission of flying Major Prescott, the Communications Engineer for the Republic of Panama, to the Panamanian Penal Colony at Coiba, Panama.

On the return trip to Albrook Field, a tropical storm arose over the ocean, forcing the flyers to return over two hundred and fifty miles of impenetrable jungle which separated them from their base at Albrook Field. Even over the land they were forced to fly over a dense fog bank which completely obscured their sight of the ground. The airplane, a Douglas OA-4A bi-motored amphibian, was about 4,000 feet above the ground when the right engine, without warning, disintegrated, throwing great strain on the right wing and the remaining engine.

At this very instant, Lieut. Wallace just happened to be in contact with Albrook Field over his ship's radio. The pilot, not knowing what was in store for him beneath the clouds, ordered the three passengers and Lieut. Wallace to jump. Lieut. Wallace, however, stayed at the radio, and as each passenger jumped he very meticulously checked them off to Albrook Field; then, taking his place beside the pilot while flying blind in the clouds, he assisted in preparing the airplane to land. Finally, the pair broke through the fog bank less than 1,000 feet above the earth and almost miraculously found directly in front of them a clearing in the tropical jungle, large enough to be used for an emergency field. Displaying great skill and courage, they landed the airplane with no damage whatsoever to either the airplane or to personnel. After a new engine had replaced the faulty one in the airplane, no further repairs were necessary, and the Amphibian was flown out of the clearing and back to Albrook Field.

In the citation accompanying the award of the D.F.C. to Lieut. Wallace, after setting forth, in substance, the circumstances reported above, it is stated: 'Lieutenant Wallace's courage and coolness in this emergency undoubtedly resulted in saving the lives of the passengers and preventing a crash landing."

Lieut. Wallace, now 32 years of age, attended the public schools of Washington, D.C., following that with two years at the Georgia Institute of Technology at Atlanta, Ga. After a

year of training at the Air Corps Training Center, where he specialized in Pursuit Aviation, he received a commission as a 2nd Lieutenant in the Air Reserve in February, 1929. He obtained his commission in the Regular Army on June 12, 1929. In September, 1934, he was transferred to Albrook Field, Panama Canal Zone. Prior to that time he was on duty with the 49th Bombardment Squadron at Langley Field, Va., from May 2, 1929, to September 5, 1930; at March Field, Calif., attending Flying Instructors' School and serving as a flying instructor from September 15, 1930, to October 5, 1931, and at the Primary Flying School at Randolph Field, Texas, from October 16, 1931, to September 4, 1934, where he performed the duties of flying instructor.

Lieut. Wallace has been stationed at Hamilton Field since January 1st of this year, and is now on duty with the 9th Bombardment Squadron.

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"AND I LEARNED ABOUT FLYING FROM THAT"

Another attempt is being made to publish in the Air Corps News Letter a series of articles under the above heading, embodying a report of some accident or near-accident, in the belief that much information of vital importance to fledgling pilots would thereby be disseminated.

Certain it is that almost every pilot in the Air Corps has on one or more occasions during his flying career experienced a close call, narrow shave, or what have you, or extricated himself from a predicament which he could have avoided in the first place had he "followed the rules." At some time or another he may have been confronted with a totally unlooked for happening, which made it absolutely necessary for him to think fast and act likewise, and some time he may have performed some foolish stunt which he mentally resolved never, never to do again, or - well, this could go on ad infinitum.

The point which it is desired to stress is that in bringing vividly to the attention of Air Corps personnel the mistakes or errors of judgment that lead to accidents many valuable lessons would be learned and retained in the memory where otherwise the lesson would be lost.

If the publication of such reports or stories would tend to influence in any way the reduction of aircraft accidents, one of the principal missions of the Air Corps News Letter would be accomplished.

And so the News Letter earnestly invites every Air Corps pilot to contribute one or more articles under the above heading for publication. The authors of such articles need not have to be accomplished feature writers to do this, and thereby perform a good turn for their fellow pilots. Just recite the facts, and the editing and added trimmings, if any are necessary, will be done in the Information Division. No names will be published if such is the wish of individual authors.

The full cooperation of every Air Corps pilot is earnestly solicited - so now, "Altogether, Boys!"

For the present there is published below an adventure which befell a Reserve officer, who recently took off on a navigation training flight in a P-26C airplane. All fuel tanks were filled, and the personal baggage in the airplane weighed about ten pounds.

After the pilot attained an altitude of 2700 feet, about one mile north of the airport, he performed the following acrobatics: double snap roll, slow roll, and snap roll. He went into the last maneuver at about 2700 feet; speed 140 miles per hour. During the attempted recovery from the snap roll, the airplane stalled on its back, going into an inverted spin. At 1,000 feet altitude, the airplane recovered from the inverted spin, but immediately went into a normal spin. After one turn of the spin, the pilot jumped with his parachute at an estimated altitude of between 600 and 800 feet.

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Numerous accidents of a similar nature have occurred in the past. It would appear that this accident might have been averted on three counts, viz:

1. If all the tanks on the P-26C had not been filled, thereby changing the balance of the airplane in such a way as to make recovery from spins more difficult, it probably would not have been necessary for the pilot to jump.
2. Had the pilot been more familiar with the type of plane he was flying, he would probably not have inadvertently fallen into an upside down spin.
3. If the pilot had had more altitude at the time he started his acrobatics he probably would have had time in this case to recover from the eventual normal spin, making it unnecessary for him to resort to his parachute.

These are three things which at least one pilot has learned and, if they are learned and taken to heart by even one-half of the other young pilots in the Air Corps, the loss of the airplane in this case will have been a profitable investment. To derive maximum value from the experience of pilots in the Army Air Corps, it is necessary to disseminate the information acquired therefrom as widely as possible. Each Air Corps officer is therefore requested to make known to his fellow pilots, through the columns of the News Letter, what he has learned and how he learned it, in order that they may avoid the pitfalls into which he had stumbled.

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Majors Lloyd C. Blackburn, from Barksdale Field, La., and Guy L. McNeil, from Fort Lewis, Wash., have been ordered to duty in the Philippines. Major Dache M. Reeves, 1st Lieut. Homer L. Sanders and 2nd Lieut. Potter B. Paige, who have been stationed in the Hawaiian Department, were assigned to duty at Chanute, Barksdale and Moffett Fields, respectively.

Major John E. Upston has been transferred from Maxwell Field to Langley Field, and Lt. Colonel Morris Berman from the San Antonio Air Depot to Wright Field, Ohio.